



Medicine and Social Media – Ethical Challenges of the 21st Century

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Authors' contributions

This work was carried out in collaboration between all authors. Author AC designed the study, wrote the first draft of the manuscript and managed literature searches. Authors VM, CA and PM managed the analyses of the study and literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: With the huge growth of social networks, their use is increasing in hospitals and clinics and by physicians. However, health professionals are not always aware of the risks inherent to the use of these tools. The aim of this study is to analyse the problems associated with the use of social media in doctor-patient communication, as well as some rules that may help overcoming the potential risks of this situation.

Methodology: Searches were conducted on Google Scholar, Google and Medline and limited to articles published in English, between 2004 and 2014. Twenty-three articles were selected out of 52. Boudreaux's social media governance website was also used to identify institutional policies on social media. The articles were analysed through thematic coding using template analysis.

Discussion and Conclusion: The control of the published information, the regular review of the privacy settings and the limiting access to personal information is of great interest not only for the physician but also for the profession he/she represents. To ensure that health professionals are

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aware not only of the advantages of using social media but also of the disadvantages of the global communication they allow it is required to follow specific rules.

Keywords: *Communication; ethics; social media social network; web 2.0.*

1. INTRODUCTION

Social networks are a set of online tools and applications that focus on the user who establishes and maintains connections with others on an on going sharing of various contents [1,2]. Facebook, Twitter and LinkedIn stand out among the most used social networks. With more than 1300 million active users worldwide, Facebook is the most popular social network [3].

With the tremendous growth of social media, their use in hospitals, clinics and by physicians is increasing. The incorporation of these networks into medical practice happens not only because of marketing strategies but also because of the interaction between colleagues and with patients (existing or prospective ones). With social media, health professionals can also share medical information quickly, discuss cases and participate in various events [1]. However, when confronting medicine (sustained in privacy, confidentiality and a formal doctor-patient relationship) with social media (sustained in sharing, openness, connectivity, transparency and informality), a large number of ethical and legal issues arise [2,4,5].

With this new reality, the line between personal and professional life becomes increasingly blurred and health professionals are not always aware of the risks inherent to the use of social media.

The aim of this study is to analyse the problems associated with the use of social networks in

doctor-patient communication, as well as some guidelines that may help overcoming the potential risks of this situation.

2. METHODOLOGY

Searches were conducted on Google, Google Scholar and Medline, using the following key words: social media, social networking, Web 2.0, Health 2.0, Facebook, Twitter, LinkedIn and online professionalism.

The search was limited to articles published in English between 2004 and 2014. Publications before 2004 were excluded because all major social media were founded after that. A qualitative text analysis was done to select relevant scientific articles on the subject under study. All articles focusing on the use of social media by physicians and medical students and on the ethical issues concerning it were included. Twenty-three articles were selected out of 52.

In terms of social media guidelines, Boudreaux's social media governance website was also used to identify institutional policies on social media. The policy documents on social media related to health associations were all analysed.

Template analysis is a technique for thematically organising and analysing qualitative data [6]. This technique was used since it was considered by the authors a good way to produce a clear and succinct overview of the most relevant findings. The final template is illustrated in Table 1 and comprised 3 first level themes.

Table 1. Template analysis: final template

First level (meaningful theme)	Second level	Third level
Connectivity	Profiles management	Personal/professional separation Privacy settings Personal and collective image
	Posts' content	
	Patients' online approaches	Friend requests Clinical advises
Confidentiality	Patient's personal information Clinical cases	
Guidelines	University guidelines Association guidelines	

3. FINDINGS

Physicians are increasingly using online communication resources for professional reasons, while sharing personal thoughts, opinions, photos and videos [7]. Because of that, various authors suggest the maintenance of two separate online identities (a professional and a personal). A professional profile should be built with an explicit objective, easily accessible, and the provided personal information should be minimal. On the other hand, personal information may be on a personal profile but its disclosure must be careful and restricted to people with whom the professional wishes to do so [8,9]. However, most users of social media question whether this separation is possible and / or desirable, given the openness and transparency that characterize them, as well as the constantly changing online searching tools [7,10].

As soon as a post is published the control of its interpretation and replication ceases, even if subsequently removed. According to their experiences, any user of the social media will make their judgment, not only about the one who posted it, but also about the institution and / or medical community that that person belongs to [7,11].

The disclosure of unprofessional posts can not only blacken the image of the physicians themselves, but also reduce patients' trust in their colleagues, employers and health services [8]. In fact, physicians benefit from the prestige and recognition that their profession has, but their actions, when not appropriate, can undermine the collective image.

A study on the lack of professionalism demonstrated in the content of American medical students' posts on social media revealed several instances of violation of patient's confidentiality, photos, sexual suggestive material, comments on consumption of alcohol or other illegal substances, and use of discriminatory language, and this content could be seen by any user of the social network in question [12]. The boundaries between freedom of expression and publication of inappropriate content are not clear.

Garner and O'Sullivan, in a study on the content posted on Facebook by medical students, reported that 52% of their sample admitted to publish photographs they considered embarrassing [13].

Chretien et al. [12], in a survey applied to 78 medical schools in the United States, found that 60% of the universities had already reported at least 1 incident resulting from published posts on social media by their students.

Go et al. [14] questioned 227 directors of surgery residency programs and 62.9% of them admitted they consider wise to visit the candidate profiles on social media during their evaluation.

Regarding Twitter, Chretien KC et al. [15] reviewed tweets written by 260 English-speaking physicians and 3% of them were categorised as unprofessional. On a similar study, Brynolf A et al. [16] analysed tweets written by 237 Swedish health professionals and 2% of them were categorised as unprofessional.

Physicians have an ethical and legal obligation to protect patient's confidentiality. The widespread sharing of clinical cases through social media makes patients often identifiable through the details and photographs published. This identification is not very often made directly through a single post but through the relationship that users can easily establish with other information previously provided [8,17].

In a 2008 study, Lagu et al. [18] performed a review of 271 blogs written by physicians and concluded that 16.6% of them contained information that allowed the identification of the patients and/or their physician.

The feeling of closeness and informality transmitted through social networks makes patient's friend requests increase. In 2011, Bosslet et al. [19] reported that 34.5% of the inquired physicians had already received at least one patient's friend request on the social network they use. Regardless of the communication between doctor and patient is offline or online, it should be consistent and occur between pre-set limits, giving both parties rights and duties [9].

Regardless of the acceptance or not of patients' friend requests on social networks, the mismanagement of the privacy settings can make the information provided of easy access to the public. Moreover, although most social media have different levels of privacy settings available, they frequently change, as well as their terms and conditions, often without previous notice [11,20].

However, the definition of online privacy becomes a little vague when, while maintaining high levels of privacy settings, the number of "friends" on social networks is larger than the number of people whom the physicians keep an offline relationship with [21]. The average number of Facebook friends is 130 [3]. For example, information given to particular patient online, for a certain reason, starts to be available to any patient who looks for it [17].

In a 2008 study, Thompson et al. [22] reported that 62.7% of the physicians and medical students' Facebook profiles in the United States were public and therefore accessible to any user of the social network. The same study reported that 70% of respondents had published their own photographs drinking alcohol and 10-50% of these photographs showed an excess of consumption. In 2010, MacDonald et al. [17] in a study conducted in New Zealand, found 37% of public profiles of newly graduated physicians.

Online approaches by patients seeking clinical advice are also increasing and should be carefully managed. The answer to these approaches is strongly discouraged, so the physician should only guide the patient to book an appointment for a face-to-face clarification [9].

4. DISCUSSION

In response to the arising ethical and legal issues related to the extensive use of social media, a few professional organizations published guidelines aimed to define the ethical use of social networking, emphasizing the need to protect patient's confidentiality, health professionals' privacy and maintenance of boundaries in the doctor-patient relationship.

In analogy to the "carbon footprint" is the idea that any user of social networks creates a "digital footprint". This "footprint", visible to other users, can have negative consequences that are also reflected in the patients, colleagues and profession. Thus, the maxim "think globally, act locally" should also be applied to the online actions of all users of social media. This challenge is even greater for the generation that is "growing online", given that in the future their "digital footprints" may reflect behaviours and ideals with which they no longer identify [7,23].

Kind et al. [24] evaluated 132 American medical schools and found out that although 126 of them had a Facebook presence, only 13 had social

media guidelines. It should be kept in mind that medical students have the same standards of professionalism than physicians and universities policies must be reviewed.

In a study conducted in the United States, 68% of the medical students and health professionals surveyed did not consider online interaction between patients and doctors to be ethical [19].

Regarding patients' friend requests, the Canadian Medical Association states that they "can be referred to the office's communications protocol, its social media policy and be directed to the physician's professional site" [25]. On the same subject, The British Medical Association suggests that health professionals who received friend requests "should politely refuse and explain to the patient the reasons why it would be inappropriate for them to accept the request" [26]. Similarly, the Australian Medical Association recommends to politely message patients informing them that it is the physician policy not to establish online friendships with patients [27].

The American Medical Association does not discourage the acceptance of friend requests from patients but advises online separation of personal and professional content while maintaining appropriate boundaries with patients [28]. The Canadian Medical Association also advises "to establish both a personal and a professional page and decide beforehand who will have access to each". Although the professional profile can contain information about the practice and general health, identifiable patient information and images should never be posted online [25].

Concerning patient's health-related questions via instant messaging, the Canadian Medical Association recommends "to ask the patient to book an appointment and inform the patient this is necessary to protect privacy and personal health information" [25].

The Medical Board of Australia recently developed a social media policy but only emphasises the idea that "when using social media, health practitioners should remember that the National Law, their National Board's code of ethics and professional conduct" apply, and doesn't recommend specific guidelines [29].

The Australian Medical Association also emphasises how easily accessible and durable online information is: "Even if using the most

stringent privacy setting, information on social networking site may still be widely available, including to various companies and search engines" [27].

The Canadian Federation of Medical Students compares social media to a "public forum akin to an op-ed in a newspaper or a lecture" [30]. Some other guidelines recommend a pause before the publication of a post in order to promote a little reflection on how the content will be interpreted by the public [9,31].

Guseh et al. [20] recommend four guidelines to be followed by health professionals: to refuse patients' friend requests, to avoid adding online collected information to the patients' medical records, to avoid publishing personal information and to understand the privacy settings of the social media they use.

Besides the need for guidelines to be followed by individual health professionals, it is also extremely important to create guidelines for teachers, students, clinics and hospitals. Since colleges are responsible for the younger members of the medical community and, consequently, for the age group with the largest presence in social media, it is of great importance for them to establish guidelines based on the "digital footprint" of their members [14].

5. CONCLUSION

Health professionals should always consider that patients, colleagues and employers can easily conduct an online search about them. The control of the published information, the regular review of the privacy settings and the limiting access to personal information is of great interest not only for the physician but also for the profession he/she represents.

It is necessary to follow specific rules to ensure that health professionals are aware not only of the advantages of using social media but also of the disadvantages of the global communication they allow.

To date, no relevant studies on social media other than Facebook have been conducted. Though this may be due to the novel nature of social media and to the growing Facebook popularity, the use of other platforms (such as Twitter or LinkedIn) is increasing and such evaluations would help determine physicians and

medical students' motives, beliefs and expectations concerning the use of social media. More research on the topic is needed so evidence-based guidelines could be created and best practices for medical colleges and physicians could be set.

COMPETING INTERESTS

Authors declare that there are no competing interests.

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